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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

SKINLO, David et al.

Serial No: 10/697,537

Filed: October 29, 2003

For: SEPARATOR BAG FOR USE IN
ELECTROCHEMICAL CELL

Art Unit: 1795

Examiner: Alix E. Echelmeyer

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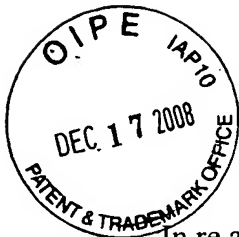
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

David M. Skinlo et al.

Serial No: 10/697,537

Filed: October 29, 2003

For: SEPARATOR BAG FOR USE IN
ELECTROCHEMICAL CELL

Art Unit: 1745

Examiner: Echelmeyer, Alix
Elizabeth

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REPLY BRIEF TO EXAMINER'S ANSWER

This Reply Brief is filed in response to the Examiner's answer (the Answer)
mailed on October 17, 2008.

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TABLE OF AUTHORITIES

None

STATEMENT OF ADDITIONAL FACTS

None.

ARGUMENT

1. Rejection of Claims 1, 2, 5-13, 16, 17, 20-22, and 34-38 under 35 USC

§103(a) as being unpatentable over Hercamp in view of U.S. Patent number 4,476,203 (Robert).

CLAIM 1

General Reply to Examiner's Answer

The Answer is largely dependent on the belief that Applicant does not understand that it is the structure of Hercamp's separator that is configured to prevent punctures. The Applicant clearly understood this at the time the Appeals Brief was filed. For instance, the Appeals Brief specifically mentions this feature of Hercamp's separator as follows:

The problems ... associated with these punctures are so severe that Hercamp has changed the structure of the separator to overcome these punctures (C2, L5-6 and title) (see Appeals Brief in the paragraph under Diagrams 1-3).

Accordingly, the Appeals Brief itself acknowledges that Hercamp's separator structure is designed to overcome the problems associated with these punctures.

As a result, there was no misunderstanding of the prior art on the part of the Applicant. Since the Applicant had the same understanding of the prior art as the

Examiner, there is nothing about this issue that either changes the Applicant's arguments or that changes the logic supporting these arguments.

The Suggested Modification is not Associated with Predictable Results

The Applicant argues that the proposed modification is not associated with predictable results because the proposed modification results in the epoxy lines being exposed to the sharp ends of Hercamp's gridwire. The Answer disagrees that the epoxy lines are exposed to the sharp ends of the grid (page 14, third paragraph). However, the Examiner's disagreement at this point in the Answer **contradicts** the Examiner's position later in the Answer. For instance, the following statement can be found further on in the Answer:

... one of ordinary skill in the art would see that it would be obvious to select an epoxy that is harder or stronger than the separator bag, **and therefore less susceptible to punctures by the gridwire ends** (emphasis added, lines 3-5 of page 15).

This statement acknowledges the need to reduce susceptibility to punctures that result from exposure of the epoxy to the gridwire ends. As a result, this statement is a concession that the epoxy lines are exposed to the grid ends as noted by the Applicant. Importantly, since the epoxy lines themselves are exposed to the

gridwire ends, the interface between the epoxy lines and the separator are also exposed to the gridwire ends as is also noted in the Appeals Brief.

Since the proposed epoxy lines would be exposed to the sharp grid ends as noted by the Applicant, the Answer supports the Applicant's argument that the proposed modification is not associated with the "predictable results" described by the *KSR* court. Further, as described by the *KSR* court, this lack of "predictable results" is evidence that the suggested modification does not properly support the obviousness rejection.

The Suggested Modification Results in Elements Not Being Used for Their Established Function

The Applicant has also argued that suggested modification does not use elements according to their established functions. Again the Answer indicates that the Applicant makes this argument out of a misunderstanding of the prior art. It is not clear how the supposed misunderstanding affects the Applicant's argument. Robert's clearly Robert's teaches the exact function of the epoxy line when it states that the epoxy line "is placed ... in order to prevent the active material from escaping (from the electrode plate) and therefore obtain a sealed assembly" (C2, L11-13). It is also true that when the suggested modification is made, the active material is free to escape Hercamp's electrode plate. Since the epoxy line would

not prevent the active material from escaping Hercamp's separator, the suggested modification does not use the epoxy line for its STATED function.

The Answer Engages in the Inventive Process in order to Support These Rejections

Finally, the Applicant notes that the Answer engages in the inventive process in order to support these rejections. For instance, the Answer includes the following argument:

... One of ordinary skill in the art would see that it would be obvious to select an epoxy that is harder or stronger than the separator bag, and therefore less susceptible to punctures by the gridwire ends (lines 3-5 of page 15).

Additionally, the Answer includes the following argument:

One of ordinary skill in the art would surely recognize that many epoxies are available that are not in liquid form, but are highly viscous and will cure long before contamination can occur (lines 15-20 of page 16).

These two are concessions that in order to make the proposed modification, an inventor would need to find an epoxy that is "harder or stronger than the separator bag" and "not in liquid form, but are highly viscous and will cure long before

contamination can occur.” There is nothing in either Hercamp or Robert that indicates what epoxy might possess the listed properties. Further, there is nothing in either Hercamp or Robert that indicates that such an epoxy exists or could be generated. Even further, there is nothing in either Hercamp or Robert that indicates that such an epoxy would adhere to the separator material at all. Even further, there is nothing in either Hercamp or Robert that indicates that the interface between the separator and such an epoxy would withstand the sharp ends of the grid.

Critically, there is nothing in either Hercamp or Robert that even suggests that it is desirable for the epoxy to have the listed properties. The Examiner had to come up with the listed epoxy properties in order to achieve successful execution of the proposed modifications. As a result, in order to support the rejection, the Answer injected additional properties into the cited art. The addition of these properties shows that the Answer engages in the inventive process itself rather than relying on teachings of the cited art. The need to engage in the inventive process in order to successfully execute the proposed modification illustrates that the proposed modification is more than “mere substitution of one element for another known in the field” and is accordingly evidence of non-obviousness (Ex Parte Mary Smith at page 13). For this reason alone, claim 1 is patentable over the cited art.

CLAIM 10

Dependent claim 10 stands rejected under 35 USC §103(a) as being unpatentable over Hercamp in view of Robert.

Claim 10 recites that “the one or more lateral seams not being positioned above a distance equal to 50% of the electrode height from the lower seam, the electrode height being measured along the edge of the electrode adjacent to the lateral seam.”

In response to this rejection, the Applicant noted that the lack of lateral seams at the claimed position would allow the sharp gridwire ends to pass freely out from between the borders of the separator due to the absence of the seam at this position. In response to this argument, the Answer states the following:

Appellant is reminded that it is the borders of Hercamp et al. and not the seams that prevent puncture of the separator. Thus, modifications to the seams would not result in puncture of the separator by the gridwire ends, because the seam does not prevent the puncture (last 2 lines of page 20).

This comment does not appear to respond to the Applicant’s argument. The Applicant is pointing out that the lack of a seam at a particular point allows the sharp ends to pass freely out from between the borders of the separator without

even puncturing a seam. The extension of the sharp ends out from between the borders places these ends in a position to cause the shorts cited in Hercamp. As a result, the above comments do not appear to address the Applicant's argument.

CLAIM 36

The Answer mischaracterizes the Applicant's argument when it states the following:

Appellant asserts that it would not have been obvious to ... form at least one additional seam after the electrode was positioned in the pocket (lines 4-5 of page 21).

Appellant made no such assertion. Instead, the Applicant argued that the cited art does not teach or suggest the formation of seams both before and after positioning an electrode in a pocket. The Answer does not indicate where the cited art teaches or suggests this limitation. Since the cited art does not teach or suggest every element of claim 36, claim 36 is patentable over the cited art.

CLAIM 38

Claim 38 recites "positioning an electrode in the pocket, the electrode including a tab with a tab opening extending through the electrode." Claim 38 also recites "positioning the electrode on a post of an electrode receiving member such

that the post extends through the tab opening.” The Appeals Brief argues that there is nothing in either Roberts or Hercamp teaching or suggesting either of these limitations. The Answer does not indicate where the cited art teaches or suggests either of these limitation. Since the cited art does not teach or suggest every element of claim 38, claim 38 is patentable over the cited art.

2. Rejection of Claims 14 and 59 under 35USC102(b) as being anticipated by U.S. Patent number 6,001,503 (Hercamp).

CLAIM 14

Claim 14 stands rejected under 35USC102(b) as being **anticipated** by U.S. Patent number 6,001,503 (Hercamp). Accordingly, this is an **anticipation** rejection rather than an obviousness based rejection.

Claim 14 recites “the seams defining a perimeter of a pocket that **surrounds** the electrode.”

The Answer mischaracterizes the Applicant’s argument regarding the patentability of claim 14 as follows:

In short, Appellant argues that the pocket of Hercamp et al. is not a pocket because it does not include a seam across the top (last 3 lines of page 21).

The Applicant made no such argument. In contrast, the Applicant argues that Hercamp does not teach seams that define a pocket that surrounds the electrode. The Applicant further argues that an interpretation of Hercamp's seams as defining a pocket that surrounds an electrode would contradict the Applicant's specification. The Answer does not address these arguments. Further, the Answer does not indicate where Hercamp teaches a pocket that surrounds an electrode. As a result, Hercamp does not teach every element of claim 14, and claim 14 is patentable over Hercamp.

3. Rejection of Claims 3, 18, 26 and 54 under 35 USC §103(a) as being unpatentable over Hercamp in view of Robert and further in view of U.S. Patent number 5,314,507 (Rossoll).

CLAIMS 3, 18, and 26

The Answer now groups claim 26 with claims 3, 18, and 54. As a result, the Applicant now addresses claim 26 under this heading.

In view of the limitation in claim 3, 18, and 26, in order for the cited art to properly support the pending rejection, the cited art must teach or suggest the claimed spacer including a substrate and an adhesive attaching the substrate to a separator material.

The Appeals Brief notes that neither Hercamp, nor Roberts, nor Rossoll teaches or suggests the claimed spacer including a substrate and an adhesive attaching the substrate to a separator material. The Answer appears to concede this issue but responds by arguing that the Applicant is only addressing the cited art individually. OK, so let's look at the references in combination. The Office Action appears to introduce the Rossoll reference as teaching the limitation at issue in these claims. In fact, the Office Action directs our attention to the battery frame taught in Rossoll. However, there is nothing in any of the cited prior art that even suggests using this frame as the claimed spacer. Further, the Answer does not indicate that any of the cited art suggests using the cited frame as the claimed spacer. Accordingly, the cited art fails to teach or suggest every element of claims 3, 18, 26, and 54.

CLAIM 54

The Appeals Brief argues that there is nothing in the cited art that teaches or suggests a spacer that is between one or more separator materials and that includes a spacer having a substrate where an adhesive attaches opposing sides of the substrate to the one or more separator materials. The Answer does not indicate where this limitation is taught or suggested in the cited art. Since the cited art does

not teach or suggest every limitation of claim 54, claim 54 is patentable over the cited art.

4. Rejection of Claims 15 is rejected under 35USC103(a) as being unpatentable over Hercamp.

CLAIM 15

Claim 15 stands rejected under 35USC103(a) as being unpatentable over Hercamp.

The Applicant argues that Hercamp does not teach or suggest the claim limitation that “the seams define four sides of a pocket, each of the pocket sides being adjacent to an edge of the electrode.” The Answer does not indicate where this limitation is taught or suggested in Hercamp. Since Hercamp does not teach or suggest every element of claim 15, claim 15 is patentable over Hercamp.

6. Rejection of Claim 23 under 35 USC §103(a) as being unpatentable over Hercamp in view of U.S. Patent number 5,674,641 (Cheu).

CLAIM 23

Claim 23 recites “an electrode positioned within the pocket, the electrode having a tab extending from the bag, a tab opening extending through the tab and being open to an edge of the tab.”

The Office Action rejects this claim as being a mere change in shape of something taught in Cheu. The Applicant overcomes this argument by noting that the claim limitation is more than a mere change in shape because it can prevent rotation of the electrode around a post. The Answer does not address this argument. Further, the Answer does not indicate where the cited art teaches or suggests the claimed tab opening. Since the cited art does not teach or suggest tab openings that are open to the edge of the tab as is claimed, claim 23 is patentable over the cited art

Respectfully submitted

A handwritten signature in black ink, appearing to read 'Travis Dodd', written over a horizontal line.

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